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Vol. XVI June 15, 1932 Number 9

FRUIT DISEASES

BLIGHT OF PEARS AND APPLES SEVERE IN SOME EASTERN SECTIONS

In response to requests for information on the prevalence of blight (Bacillus amylovorus) this year, telegrams were received from a number of collaborators, and are quoted below, together with some additional reports. It will be seen that in the majority of cases blight is said to be more prevalent than in recent years.

NEW YORK: Indications are apple blight will be severe. Just beginning to show on blossoms. In week or two should know definitely. (M. F. Barrus, telegram - June 6).

The following reports are from the State College of Agriculture Weekly News Letter.

Greene County - Twig blight following blossom blight was found on Clapp's Favorite pear in one orchard. Terminal blight present in one young tree. (E. G. Brougham, May 31).

Dutchess County - Blight showing up rather severe in a few scattering pear and apple orchards. Blossom, twig, and fruit infection observed, mostly on Greening apples and Bosc pears. (J. A. Evans, June 6).

PENNSYLVANIA: Blight on pears and apples slightly less than past few years. I have seen some blight showing up for the past couple of weeks, but it has not been nearly so general nor severe as for the past two years. (R. S. Kirby, telegram and letter, June 8).

MARYLAND: Blight is more prevalent this year as compared with recent years on both apple and pear. (Beaumont, telephone, June 10).

VIRGINIA: Pear and apple blight are much more prevalent and severe than for several years. Much more blossom blight this year than last when twig blight predominated on apples and pears. The disease is causing considerable damage in some orchards. Blight is common over all Northern Virginia. Disease is spreading little now. (A. B. Groves, telegram, June 6).

Blossom blight appeared very suddenly on pears in this region on May 15. The majority of the trees are affected, most of them severely. Twig blight did not appear until several days later, and is not abundant as yet. Pears were in full blossom at Winchester from April 18 to 28, there being considerable variation between varieties.

Blossom blight is doing considerable damage to apples in many orchards. Grimes, Ben Davis, York and Jonathan are most commonly affected, although blight may be found on almost all varieties, the severity of attack varying in different orchards. Twig blight is not very abundant, although it is beginning to show up. Practically all varieties were in full bloom on May 4-5 in the northern section of Virginia. (A. B. Groves - May 25).

WEST VIRGINIA: Apple and pear blight less than normal this year. (F. J. Schneiderhan, telegram, June 8)

WISCONSIN: Fire blight started just after petal fall. General on Dudley and Snow, scattered on Wealthy, none seen on Mackintosh to date. In regions of hold over cankers too early for satisfactory comparison. Little blossom blight so far. (R. E. Vaughan, telegram, June 7).

NOTES ON CRANBERRY DISEASES

Neil E. Stevens

OREGON

Rose bloom caused by Exobasidium oxycocci is very abundant this spring, especially on the Howes variety. In certain low areas 40 to 50 per cent of the plants were affected.

Frost control. Frost control continues to be a problem on the Pacific Coast although its importance was not realized during the early years of the development of the industry in that region. As few of the bogs are level it is difficult to flood them completely, and F. T. Eagan, who is manager of a large cranberry bog in Oregon, is experimenting with an airplane propeller driven by a gasoline engine as a means of driving air warmed by brush fires down over the bogs.

False blossom (virus). It was impossible to find false blossom on the Oregon bogs, even in places known to be slightly infected ten years ago. This does not mean that the disease has been eliminated but it does mean that it is growing extremely rare. The absence from this region of the leafhopper which carries false blossom prevents the spread of the disease and with the death of the diseased vines they have been gradually replaced by healthy ones.

WISCONSIN

In connection with the above observation on false blossom in Oregon, Mr. L. M. Rogers, Cranberry Specialist of the Wisconsin State Department of Agriculture, has observed that during the winter 1930-1931, when there was severe winter killing on many bogs due to the scarcity of flooding water, plants affected with false blossom proved much more susceptible to freezing injury than healthy plants. As a whole, the false blossom problem in Wisconsin appears much less serious than a few years ago since the planting of the Howes variety has practically stopped. This is due partly to the fact that this variety is particularly susceptible to false blossom, and partly to the fact that on the northern bogs the berries produced by the Howes variety are too small to permit satisfactory yields.

As yet this year there is little evidence of "leaf drop" which was so severe during the spring of 1931.

NEW JERSEY

In the report of the New Jersey Cranberry Substation for 1932 attention is called to the fact that fruit rot was more serious in 1931 than in the preceding ten years. This agrees with the conditions in Massachusetts noted in the current volume of the Plant Disease Reporter, February 15, 1932, Page 12.

PEACH LEAF CURL (EXOASCUS DEFORMANS) SEVERE IN UNSPRAYED ORCHARDS THIS YEAR

NEW YORK: Reports from various counties quoted in the State College of Agriculture Weekly News Letter, May 23 and 31 and June 6, state that leaf curl is generally severe in unsprayed orchards or those not receiving thorough or timely spraying.

VIRGINIA: Peach leaf curl is generally severe on peach trees which received no spray for the disease. The disease was first observed on May 1. (A. B. Groves, May 25).

KENTUCKY: Severe everywhere on unsprayed trees. (W. D. Valleau May 13).

APPLE DISEASES IN VIRGINIA

Scab (Venturia inaequalis). Heavy scab spore discharges were noted at Winchester on May 1, 5 and 9. The only favorable infection period was during the week of May 9 to 13, during which the rainfall was almost continuous and the temperature remained low. As a result of this, apple scab is now more abundant than for the past three seasons here, although the situation is not alarming in any well sprayed orchards. The first scabby fruit was observed at Winchester on May 25.

Mildew (Podosphaera leucotricha). Diseased growths proceeding from buds on twigs affected during 1931 are quite common on young Jonathan trees. Practically all of the young shoots which were diseased last year now bear completely diseased new growth, although secondary infections are not common as yet. The disease is more common than at this time last season. (A. B. Groves, May 25).

DISEASES OF SPECIAL CROPS

ADDITIONAL NOTES ON THE OCCURRENCE AND CONTROL OF TOBACCO DOWNY MILDEW

The accompanying map (figure 3) shows the distribution of downy mildew (Peronospora hyoscyami) in seed beds in Maryland and Virginia. The disease is reported as causing damage in the field in North Carolina.

MARYLAND: Downy mildew was found May 31 on two tobacco beds in Upper Marlboro, Prince Georges County. Both beds were in woods and well isolated from others. One showed just a trace of the disease, the other had 25 per cent infection well scattered throughout the bed. Spraying was immediately started on both beds in connection with spraying experiments now being conducted in this region. (E. E. Clayton and R. A. Jehle).

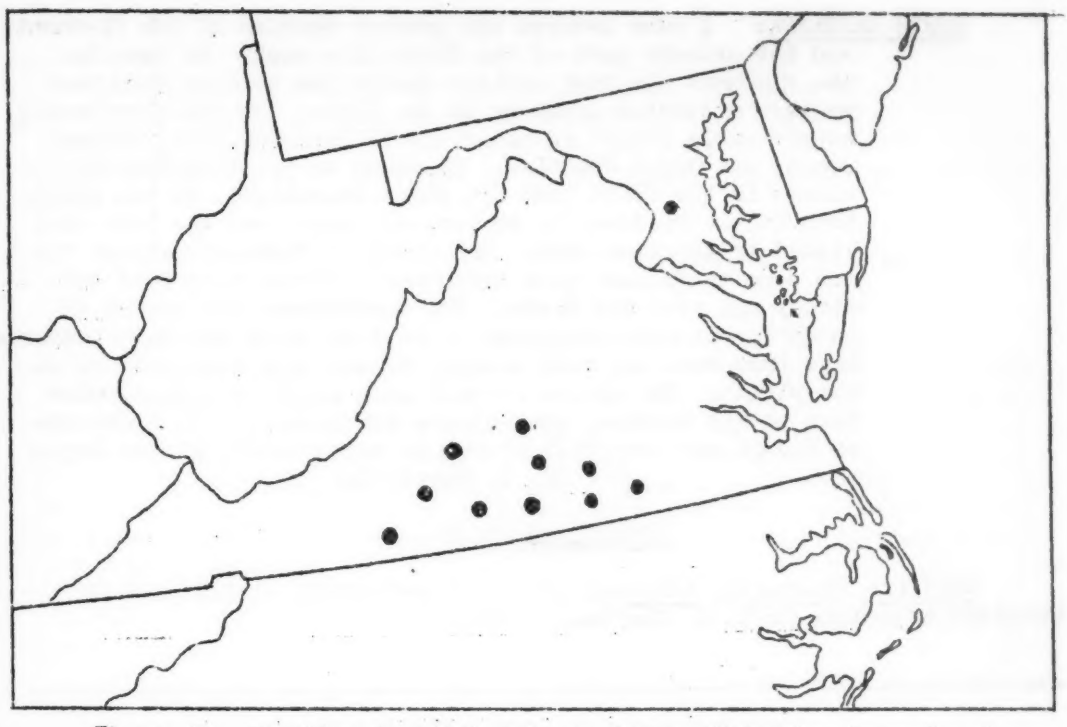

Figure 3. Counties in which tobacco downy mildew has been found in Virginia and Maryland in 1932.

VIRGINIA: The trouble has been more or less serious in Pittsylvania, Mecklenburg, Lunenburg, Brunswick, Halifax and Charlotte Counties and of minor importance in Appomattox. We have carried on spray demonstrations for control in all of these Counties for the past four weeks. I think we have checked the spread of the disease in most cases. I think the fact that we have had such uniformly good results is because we have been using a 4-4-50 Bordeaux spray which seems to have given better control than the weaker sprays recommended in other States. I have not found the disease in Counties southwest of Roanoke. The disease, however, has occurred in Patrick, Franklin, and Bedford Counties. (James Godkin, June 8).

NORTH CAROLINA: I have covered the greater section of the Piedmont and the eastern part of the State this week. We have in the Piedmont the most serious damage due to blue mold that we have witnessed anywhere in the State. We are also having considerable injury in the field in Robeson, Pitt, Craven, Jones, and Wayne Counties. It seems to be attacking the plants in the field that are about knee-high. In the plant beds in the Piedmont in numbers of cases even the buds were killed by the blue mold. The spray of Bordeaux mixture did not seem to do much good last week. It was very cold and cloudy all over the State. The temperature was around 42 to 45°F. in most sections. I believe it is the cold temperature that does the most serious damage when blue mold is on the plants. The spread is much more rapid in cool weather than in hot weather, even cloudy hot weather. It looks now as though our crop will be cut in all sections of the State. (E. Y. Floyd, May 30).

TOBACCO WILDFIRE

Wildfire (Bacterium tabacum) is severe and widely distributed in Maryland according to E. E. Clayton. (June 1).

D I S E A S E S O F T R E E S

VERTICILLIUM WILT OF MAPLE, AILANTHUS, AND ELM

G. F. Gravatt and R. B. Clapper
Division of Forest Pathology

On a recent field trip, Verticillium wilt was found to be unusually prevalent on Norway maples at Roanoke, Virginia. Hundreds of trees were noted in various stages of decline and all of those cut into showed the typical green or dark streaks in the white sapwood. The wilt was also noted at Pulaski, Staunton, Harrisonburg, and other places in the valley of Virginia.

At Washington, D. C., the Norway and sugar maples are showing an unusual amount of dying and wilting of parts of the trees this spring.

J. F. Collins, of the Providence, Rhode Island Office, writes that hundreds of sugar maples in various parts of that city have dead limbs and frequently half or more of the tree is dead. The characteristic greenish discoloration is present in the sapwood. He also reports that unusually large numbers of wilt specimens and inquiries about the disease are being received this spring. An unusual number of inquiries are being received at the Washington Office.

Richard P. White writes that the Verticillium wilt is unusually abundant on Norway maples in New Jersey this year.

On the other hand, R. P. Marshall writes on June 9 from the New Haven Office that the Verticillium wilt of maple appears from preliminary observations to be less prevalent than usual in the southwestern part of Connecticut. Some trees known to be infected in the past so far this spring are not showing any dying parts. Reports on the prevalence of Verticillium wilt made this early in the season are all subject to marked change as the season advances and more specimens are examined. The after effects of the drouth, winter injury, and other factors sometimes cause confusion.

The preliminary reports of increased prevalence of Verticillium wilt in some sections and of decreased prevalence in others this spring suggest that some unusual climatic factor has favored its development. If pathologists will note the prevalence of the wilt this year in comparison with that of an average year and send a letter to the Plant Disease Survey or the Division of Forest Pathology, it will facilitate correlating the climatic factors with the damage done by the disease.

This spring, at Roanoke, Virginia, Verticillium wilt was also found on an Ailanthus tree in the immediate vicinity of a Norway maple planting affected by Verticillium. The discoloration of the Ailanthus wood is yellowish buff, quite different from the greenish discoloration in the white sapwood of maples. A report this spring from David Schweizer that a large number of old and young Ailanthus trees are dead or dying in the parks of New York City indicates that the Verticillium that was found in the trunks and limbs of the trees examined last fall is continuing to spread. Last year L. W. R. Jackson, of the Philadelphia branch, found Verticillium causing considerable damage to Ailanthus in that City, but he has not reported conditions this year.

An American elm at Washington, which had the Verticillium wilt last year, has about 15 per cent of the tree dead this spring. The disease is not prevalent on elms at Washington. Curtis May and O. N. Liming report that so far this year the specimens of wilted elm received at the Dutch Elm Disease Laboratory at Wooster, Ohio, are showing less prevalence of

the Verticillium wilt, which is so similar in symptoms to the Dutch elm disease. Only eight trees with the Dutch elm disease (Graphium ulmi) have been found in this country. No cases have yet been found this year. The cooperation of all pathologists in watching for this destructive European disease is also requested, as there is still some possibility of eradicating it before it becomes established here.